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TELEDYNE WAH CHANG
053 0534

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Office of Environmental Cleanup

March 10, 2017

Mr. Ravi Sanga
EPA Remedial Project Manager
U.S. EPA Region 10
1200 Sixth Avenue
Suite 900, ECL 111
Seattle, Washington 98101

RE: Wah Chang January through February 2017 Bimonthly Progress Report,
Consent Decree Requirement, Section 10, Paragraph 30

Dear Mr. Sanga:

In accordance with Section 10 of Wah Chang's Consent Decree, enclosed are three (3) copies of the Bimonthly Progress Report for the December 28, 2016, - February 27, 2017, period. A supplemental discharge monitoring report for radium-226 and radium-228 sampling events is also enclosed.

If you have any questions or need additional information, please contact me at (541) 926-4211 x. 6365.

Regards,

Noel Mak
NPL Program Coordinator

Enclosures: 1. Extraction and Fabrication Area Bimonthly Summaries
2. Table 2-1B and Table 2-2B
3. ATI Millersburg Operations Supplemental DMR

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Bimonthly Report for the
Wah Chang NPL Program
January and February 2017

1. Progress made during the current period, including actions taken, problem areas encountered, recommendations for solutions and problems which have been resolved:

South Extraction Area. Groundwater extraction and treatment operations were shutdown on April 18, 2011, per prior EPA approval. The South Extraction Area completed a five year rebound monitoring period in 2016.

Feed Makeup Area. Groundwater extraction and treatment operations yielded 8,127 gallons for this period versus 4,752 gallons for the prior period. Extracted groundwater pH values rose this period from 4.99 standard units (SU) on December 28 to 5.01 SU on February 27.

The reduced extraction volume was due to system outages caused by freezing weather.

Fabrication Area. Groundwater extraction and treatment operations yielded 2,234,794 gallons containing 2.5 pounds of CVOCs this period versus 2,108,199 gallons (6.6 pounds of CVOCs) for the prior period and 2,235,881 (4.6 pounds of CVOCs) during January-February 2016.

Extraction well FW-7 was shutdown on July 30, 2009, with EPA approval. The well is being monitored quarterly for rebound in CVOC concentrations.

Farm Ponds Area. No activity.

Solids Area. No activity.

2. Anticipated problems expected to be encountered, recommended solutions and technical and scheduling implications:

None.

3. Problems that have been resolved including any information obtained from previously identified problem areas:

Freeze damage to extraction wells repaired.

4. Deliverables submitted including dates of completion; deliverables anticipated to be submitted during the next bimonthly period; and reasons due dates for any future deliverable may need to be revised:

Consent Decree deliverables (see Table 2-1B) submitted this period included the November-December bimonthly progress report.

Statement of Work (SOW) deliverables (see Table 2-2B). No SOW deliverables were submitted this period.

5. Upcoming events/activities planned, including such activities as field surveys, meetings, etc., and all major tasks to be performed within the next reporting period:

As schedules permit, conference calls between the EPA remedial project manager, DEQ project manager and the Wah Chang NPL coordinator will continue. These calls generally occur every other Wednesday at 1:30 p.m.

6. Key staffing changes including consultant, contractor or subcontractor personnel:

None to report.

**Wah Chang - Extraction Area
Groundwater Remediation Monthly Summary
December 28, 2016 - February 27, 2017**

Parameter/Area/Well No.	Notes	Prior Period	Jan-17	Feb-17	This Period	Cumulative
Operation Hours						
South Extraction	(1)	0	0	0	0	78,869
Feed Makeup	(2)	1,394	799.1	671.9	1,471	125,805
Extraction Gallons						
South Extraction	Recorded 8/29/2008					
EW-4		0	0	0	0	0
EW-5		0	0	0	0	0
EW-6		0	0	0	0	0
Total		0	0	0	0	16,494,922
Feed Makeup	Recorded 8/29/2008					
EW-1		2,770	3,849	4,278	8,127	417,046
EW-2		1,982	0	0	0	789,491
EW-3		0	0	0	0	302,802
Total		4,752	3,849	4,278	8,127	4,586,629
Influent Concentration						
South Extraction						
Total VOCs (ug/L)	(4)	0.5		Less Than	0.5	
Feed Makeup						
TDS (mg/L)	(4)	1,410			1,410	
Radium 226 (pCi/L)	(4)	3			3	
Radium 228 (pCi/L)	(4)	3.2			3.2	
Fluoride (mg/L)	(4)	2		Less Than	2	
Midpoint Concentration						
South Extraction						
Total VOCs (ug/L)	(3), (4)	<0.50			<0.50	
Mid-Point Train 1	(3), (4)					
Mid-Point Train 2	(3), (4)					
Contaminant Mass Extracted (pounds)						
Total VOCs		0.00	0.00	0.00	0.00	11
TDS		33	45	50	96	203,633
Fluoride		0.1	0.06	0.07	0.1	203

Notes:

1. South Extraction operations initiated on October 18, 2000.
2. Feed Makeup operations initiated on April 10, 2002.
3. New carbon filter installed on 11/05/08.
4. Data shown for prior period is for samples collected in December 2016. This period is for samples collected in December 2016.

Wah Chang - Fabrication Area
Groundwater Remediation Monthly Summary (1)
December 28, 2016 - February 27, 2017

Parameter/Well No.	Notes	Prior Period	Jan-17	Feb-17	This Period	Cumulative
Operation Hours						
	(Start Date)					
FW1	6/28/2001	1152	396.6	606.1	1003	121,974
FW2	6/18/2001	1392	799.1	672.2	1471	131,018
FW3	5/15/2001	1393	740.8	669.4	1410	117,824
FW4	4/26/2001	1394	799.2	672.4	1472	128,036
FW5	8/2/2001	1393	799.1	668.5	1468	121,201
FW7	4/16/2001	0	0	0	0	52,692
	Total	6724			6823	969,745
Extraction Gallons						
FW1	Recorded 8/29/2008	691,226	229,901	1,705	231,606	45,535,297
FW2	Recorded 8/29/2008	506,512	320,399	268,809	589,208	86,329,320
FW3	Recorded 8/29/2008	267,585	339,428	338,136	677,564	16,499,739
FW4	Recorded 8/29/2008	362,305	188,189	146,402	334,591	29,674,059
FW5	Recorded 8/29/2008	280,571	182,391	219,434	401,825	23,412,241
FW7	Recorded 8/29/2008	0	0	0	0	12,067,269
	Total	2,108,199	1,260,308	974,486	2,234,794	213,517,925
Influent Concentration						
FW1	(Total VOCs) ug/L (2)	673			673	
FW2	(Total VOCs) ug/L (2)	25			25	
FW3	(Total VOCs) ug/L (2)	351			351	
FW4	(Total VOCs) ug/L (2)	375			375	
FW5	(Ammonia/Ammonium) mg/L (2)	347			347	
FW7	(Total VOCs) ug/L (2)	0.5		Less than	0.5	
Midpoint Concentration						
FW1-1	(Total VOCs) ug/L (2)	--			--	CT4 on 10/21/05
FW1-2	(Total VOCs) ug/L (2)	--			--	CT4 on 10/21/05
FW2	(Total VOCs) ug/L (2)	--			--	CT6 on 3/17/06
FW3	(Total VOCs) ug/L (2)	--			--	CT6 on 3/17/06
FW4	(Total VOCs) ug/L (2)	--			--	CT2 on 3/17/06
FW5	(Ammonia/Ammonium) (2, 3)	--			--	
FW7	(Total VOCs) ug/L (2)	--			--	CT2 on 3/17/06
Contaminant Mass Extracted (pounds)						
FW1	(Total VOCs)	5.23	1.29	0.01	1.30	637
FW2	(Total VOCs)	0.12	0.07	0.06	0.12	135
FW3	(Total VOCs)	0.00	0.00	0.00	0.00	127
FW4	(Total VOCs)	1.20	0.59	0.46	1.05	118
FW5	(Ammonia/Ammonium)	1875	528	635	1164	221,136
FW7	(Total VOCs)	0.00	0.00	0.00	0.00	3
	Total VOCs	6.6	1.9	0.5	2.5	1,021
	Total Ammonia/Ammonium	1875	0	0	1164	221,136

Notes:

1. Due to poor well yield (< 0.1 gpm) no pump or treatment system equipment installed at FW-6.
2. Results shown for prior period are for samples collected in December 2016. This period is for samples collected in December 2016.
3. Ammonium concentration = 1.2142 * ammonia concentration.

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Deliverables Within Lodging of the Consent Decree						
Notification of Project Coordinator and Alternate Project Coordinator	XII. 42 Page. 32	Within 20 days of lodging of CD	02/20/97	02/20/97	01/19/97 03/31/98	03/06/97
Notification of Project Coordinator Change					03/10/00 08/04/00 June 2002 11/12/08	None Received 10/12/00 None Received
Deliverables Within Entry of the Consent Decree						
Owner shall record a certified copy of this CD with the Linn County Clerk, Office of Deeds and Records	V. 9.a Page 13	Within 15 days of the entry of the CD	04/22/97	04/22/97	04/22/97	NA
Owner shall record at the Recorder's Office a Notice of Obligation to provide access under Section XI and related covenants if any.	V. 9.b Page 14	Within 15 days of the entry of the CD	04/22/97	04/22/97	04/22/97	NA
Provide Notice to EPA and DEQ in writing the Name, Title and Qualifications of the Supervising Contractor	VI. 10.a. Page 15	Within 20 days after entry of this CD	04/28/97	02/20/97	02/19/97	03/06/97
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP and, if required, a TSWP and HASP	VI. 11. a. Page 16	Within 45 days of Authorization to Proceed (approval of Supervising Contractor by EPA)	05/21/97	04/03/97	04/03/97	06/02/97
Health and Safety Plan for Field Design Activities	VI. 11.a Page 16	Within 45 days of authorization to proceed (approval of Supervising Contractor by EPA)	05/21/97	05/05/97	05/02/97	NA
Establish financial security in the amount of \$2.5 million in one of 5 forms	XII. 43 Page 33	Within 30 days of Entry of CD	05/07/97	05/07/97	05/02/97	NA
Reimburse \$154,000 to EPA Haz. Substance Superfund	XVII. 54 Page 40	Within 30 days of Entry of CD	05/07/97	05/07/97	05/02/97	NA

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
for past Response Costs						
Written Monthly Progress Reports – 1997	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	05/10/97 06/10/97 07/10/97 08/10/97 09/10/97 10/10/97 11/10/97 12/10/97 01/10/98	05/10/97 06/10/97 07/10/97 08/10/97 09/10/97 10/10/97 11/10/97 12/10/97 01/10/98	05/09/97 06/09/97 07/07/97 08/08/97 09/09/97 10/10/97 11/07/97 12/10/97 01/10/98	NA
Written Monthly Progress Reports – 1998	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/98 03/10/98 04/10/98 05/10/98 06/10/98 07/10/98 08/10/98 09/10/98 10/10/98 11/10/98 12/10/98 01/10/99	02/10/98 03/10/98 04/10/98 05/10/98 06/10/98 07/10/98 08/10/98 09/10/98 10/10/98 11/10/98 12/10/98 01/10/99	02/10/98 03/06/98 04/10/98 05/08/98 06/05/98 07/02/98 08/05/98 09/03/98 10/05/98 11/06/98 12/07/98 01/08/99	
Written Monthly Progress Reports – 1999	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/99 03/10/99 04/10/99 05/10/99 06/10/99 07/10/99 08/10/99 09/10/99 10/10/99 11/10/99 12/10/99 01/10/99	02/10/99 03/10/99 04/10/99 05/10/99 06/10/99 07/10/99 08/10/99 09/10/99 10/10/99 11/10/99 12/10/99 01/10/99	02/05/99 03/05/99 04/07/99 05/06/99 06/08/99 07/08/99 08/05/99 09/08/99 10/04/99 11/05/99 12/07/99 01/07/00	
Written Monthly Progress Reports – 2000	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/00 03/10/00 04/10/00 05/10/00 06/10/00 07/10/00 08/10/00 09/10/00 10/10/00 11/10/00 12/10/00 01/10/01	02/10/00 03/10/00 04/10/00 05/10/00 06/02/00 07/05/00 08/07/00 09/07/00 10/05/00 11/07/00 12/07/00 01/08/01	02/03/00 03/09/00 04/07/00 05/08/00 06/02/00 07/05/00 08/07/00 09/07/00 10/06/00 11/07/00 12/07/00 01/08/01	

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule

Wah Chang NPL Program

Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Monthly Progress Reports – 2001	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/01 03/10/01 04/10/01 05/10/01 06/10/01 07/10/01 08/10/01 09/10/01 10/10/01 11/10/01 12/10/01 01/10/02	02/08/01 03/08/01 04/06/01 05/08/01 06/06/01 07/09/01 08/09/01 09/07/01 10/09/01 11/07/01 12/06/01 01/07/02	02/08/01 03/08/01 04/09/01 05/09/01 06/07/01 07/10/01 08/10/01 09/10/01 10/09/01 11/08/01 12/07/01 01/08/02	
Written Monthly Progress Reports – 2002	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/02 03/10/02 04/10/02 05/10/02 06/10/02 07/10/02 08/10/02 09/10/02 10/10/02 11/10/02 12/10/02 01/10/03	02/07/02 03/07/02 04/08/02 05/07/02 06/06/02 07/01/02 08/08/02 09/06/02 10/04/02 11/06/01 12/06/02 01/07/03	02/08/02 03/09/02 04/09/02 05/08/02 06/07/02 07/03/02 08/09/02 09/09/02 10/04/02 11/06/02 12/09/02 01/08/03	
Written Monthly Progress Reports – 2003	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/03 03/10/03 04/10/03 05/10/03 06/10/03 07/10/03 08/10/03 09/10/03 10/10/03 11/10/03 12/10/03 01/10/04	02/07/03 03/07/03 04/08/03 05/08/03 06/09/03 07/08/03 08/08/03 09/09/03 10/07/03 11/10/03 12/09/03 01/09/04	02/07/03 03/07/03 04/08/03 05/08/03 06/09/03 07/08/03 08/08/03 09/09/03 10/07/03 11/10/03 12/09/03 01/09/04	
Written Monthly Progress Reports - 2004	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/04 03/10/04 04/10/04 05/10/04 06/10/04 07/10/04 08/10/04 09/10/04 10/10/04 11/10/04 12/10/04 01/10/05	02/06/04 03/10/04 04/09/04 05/10/04 06/10/04 07/08/04 08/09/04 09/09/04 10/10/04 11/10/04 12/10/04 01/10/05	02/09/04 03/10/04 04/10/04 05/10/04 06/10/04 07/08/04 08/10/04 09/10/04 10/10/04 11/10/04 12/10/04 01/10/05	
Written Bi-Monthly Progress Reports – 2005 (schedule change verbally approved by EPA 2/16/2005)	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2005, and January 2006	03/10/05 05/10/05 07/10/05 09/10/05 11/10/05 01/10/06	03/09/05 05/10/05 07/08/05 09/10/05 11/10/05 01/10/06	03/10/05 05/10/05 07/10/05 09/10/05 11/10/05 01/10/06	NA

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Bi-Monthly Progress Reports - 2006	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2006, and January 2007	03/10/06 05/10/06 07/10/06 09/10/06 11/10/06 01/10/07	03/10/06 05/10/06 07/10/06 09/10/06 11/10/06 01/10/07	03/10/06 05/11/06 07/12/06 09/15/06 11/10/06 01/09/07	NA
Written Bi-Monthly Progress Reports - 2007	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2007, and January 2008	03/10/07 05/10/07 07/10/07 09/10/07 11/10/07 01/10/08	03/10/07 05/10/07 07/10/07 09/10/07 11/10/07 01/10/08	03/12/07 05/10/07 07/10/07 09/10/07 11/09/07 01/10/08	NA
Written Bi-Monthly Progress Reports - 2008	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2008, and January 2009	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	NA
Written Bi-Monthly Progress Reports - 2009	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2009, and January 2010	03/10/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	03/10/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	03/09/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	NA
Written Bi-Monthly Progress Reports - 2010	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2010, and January 2011	03/10/10 05/10/10 07/10/10 09/10/10 11/10/10 01/10/11	03/10/10 05/10/10 07/10/10 09/10/10 11/10/10 01/10/11	03/10/10 05/07/10 07/10/10 09/10/10 11/10/10 01/10/11	NA
Written Bi-Monthly Progress Reports - 2011	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2011, and January 2012	03/10/11 05/10/11 07/10/11 09/10/11 11/10/11 01/10/12	03/10/11 05/10/11 07/10/11 09/10/11 11/10/11 01/10/12	03/10/11 05/10/11 07/08/11 09/09/11 11/10/11 01/10/12	NA
Written Bi-Monthly Progress Reports - 2012	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2012, and January 2013	03/10/12 05/10/12 07/10/12 09/10/12 11/10/12 01/10/13	03/10/12 05/10/12 07/10/12 09/12/12 11/10/12 01/10/13	3/10/12 5/10/12 7/09/12 9/09/12 11/09/12 01/09/13	NA
Written Bi-Monthly Progress Reports - 2013	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2013, and January 2014	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	NA

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule

Wah Chang NPL Program

Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Bi-Monthly Progress Reports - 2014	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2014, and January 2015	03/10/14 05/10/14 07/10/14 09/10/14 11/10/14 01/10/15	03/10/14 05/10/14 07/10/14 09/10/14 11/10/14 01/10/15	03/10/14 05/10/14 07/09/14 09/10/14 11/10/14 01/09/15	NA
Written Bi-Monthly Progress Reports - 2015	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2015, and January 2016	03/10/15 05/10/15 07/10/15 09/10/15 11/10/15 01/10/16	03/10/15 05/10/15 07/10/15 09/10/15 11/10/15 01/10/16	03/10/15 05/05/15 07/09/15 09/10/15 11/10/15 01/10/16	NA
Written Bi-Monthly Progress Reports - 2016	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2016, and January 2017	03/10/16 05/10/16 07/11/16 09/10/16 11/10/16 01/10/17	03/10/16 05/10/16 07/11/16 09/10/16 11/10/16 01/10/17	03/03/16 05/06/16 07/11/16 09/08/16 11/09/16 01/10/17	NA
Other CD Requirements						
Reimburse EPA Future Response Costs	XVII. 56 Page 41	Within 30 days of billing	To be determined			NA
EPA Approval of Plans and Submissions	XI. Page 30	As stated	To be determined			Specific to submittal
Section 103 CERCLA Reporting Requirements	X. 31 Page 29.	Within 24 hours of each occurrence	To be determined			Specific to submittal
Copy of CD available to all Contractors and Subcontractors	III. 3 Page 6		As needed		Barker Trucking 07/02/97	NA
Notification of offsite shipment of waste totaling more than 10 CY to an out-of-state facility	VI. 15. 16. Page 22	Prior to shipment of any waste offsite	To be determined and/or as necessary	05/09/97	05/09/97 06/30/98	06/23/97 07/01/98
Use of Coffin Butte Landfill for non-hazardous CERCLA waste disposal				12/20/00	12/20/00	01/17/01
Certificates of Completion of Construction (CCC)	XV. Page 35	90 days after completion of RA Final Construction. See CD and Table 5-4 ^b	South Extraction Feed Makeup Fabrication	01/17/01 07/31/02 11/01/01	03/07/01 07/18/02 11/05/01	05/30/01 09/26/02 05/23/02
Certificates of Completion of Remedial Action (CCRA)	XV. Page 37	After completion of Remedial Action. See CD	Truax Creek South Extraction	10/01/02 TBD	09/30/02	12/11/02

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
			GW Feed Makeup GW Fabrication GW Farm Ponds GW Solids GW	TBD TBD		
Secure and Maintain Comprehensive Liability Insurance and ensure satisfaction of Worker's Compensation Insurance for Contractors	XVIII. 61 Page 44	15 days before commencing any onsite work	To be determined	Acquired in 1996	05/03/97 renewed	NA
WC shall propose to EPA and DEQ its participation in Community Relations Plan to be developed by the EPA	XXXI. 108. Page. 67	Not specified	To be determined			Specific to submittal
Notification of Collection of Samples	VIII. 23 Page 26	28 days prior to sample collection unless otherwise agreed to in writing by EPA	To be determined	Provided in bimonthly progress reports	Provided in bimonthly progress reports	Specific to submittal

^a Based on entry of Consent Decree.

^b Submittal date within 30 days of completion of remedial construction was initially shown. Submittal date was revised on 12/06/01 to 90 days based on SOW Table 5-4.

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Overall Site Management Deliverables						
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP, and HASP	Page 32	Within 45 days of EPA authorization to proceed	05/21/97	04/03/97	04/03/97	06/02/97
Surface and Subsurface Soil RD/RA Deliverables						
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP, and HASP	Page 32	Within 45 days of EPA authorization to proceed	05/21/97	04/03/97	04/03/97	06/02/97
RD/RA Work Plan for Surface and Subsurface Soils including a SAP Addendum, and Transport/ Disposal Plan	5.2.2.4 Page 34, 6.2.1.5 Page 53	Within 60 days of Approval of Sitewide Work Plan	8/01/97	08/01/97	08/01/97	08/25/97
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to initiation of construction	To be determined	09/04/97	08/20/97	N/A
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary project completion of construction	To be determined	To be determined; Schmidt Lake area excavation scheduled for 08/98	08/26/98	10/12/2000
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all outstanding construction items	To be determined	09/15/98	07/31/98 (interim report) 10/30/98 (addendum to 07/31/98 interim report and 08/18/98 EPA comments)	10/12/2000

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
RA Construction Report for Surface and Subsurface Soils	5.2.2.4 Page 34	60 days from completion of RA	To be determined	To be determined	8/20/99 (including all addenda)	03/02/00
Precertification Inspection	6.2.2.6 Page 58	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6 Page 58	After precertification inspection	To be determined	To be determined	To be determined	To be determined
Sediments						
RD Work Plan including SAP Addendum for Sediments	5.2.3.5 Page 37	60 days from Approval of Sitewide Work Plan	8/02/97	04/03/97	04/03/97	06/23/97
RD Report for Sediments	5.2.3.5 Page 37	120 days from Approval of RD Work Plan for Sediments	To be determined	05/02/97	05/05/97	06/23/97
RA Work Plan for Sediments	5.2.3.5 Page 37	30 days from Approval of RD Report	To be determined	05/30/97	06/09/97	07/03/97
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to initiation of construction	To be determined	07/14/97	07/08/97	N/A
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary project completion of construction	To be determined	10/01/97	08/20/97	10/12/2000
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all outstanding construction items	To be determined	11/01/97	10/15/97	10/12/2000

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

3/10/2017

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
RA Construction Report for Sediments	5.2.3.5 Page 37	60 days from completion of construction	12/15/97	12/15/97	12/12/97	10/12/2000
Operation and Maintenance Plan for Sediments	5.2.3.5 Page 37	60 days from completion of construction	12/15/97	12/15/97	12/12/97	10/12/2000
Precertification Inspection	6.2.2.6 Page 55	Within 90 days of attaining Performance Standards for RA	To be determined	Waived	NA	NA
Remedial Action Report	6.2.2.6 Page 55	After precertification inspection	To be determined	Waived	NA	NA
Sediment Monitoring Reports	6.2.3.4 Page 37	Following annual monitoring events	To be determined	August 1998 Event	09/03/98	
				August 1999 Event	10/05/99	03/02/2000
				August 2000 Event	10/13/00	
				August 2001 Event	09/28/01	
				August 2002 Event	10/04/02	12/11/2002
Sediment Monitoring Reports – Post RA Completion	Per EPA Request	Per EPA Request	To be determined	October 2007	11/08/07	Not required
Final RD/RA Report for Sediments	5.2.3.5 Page 37	Following 5-year monitoring period	To be determined	Waived	Not required	Not required

Groundwater with VOC RD/RA Deliverables

RD/RA Work Plan for GW with VOC incl. SAP and QAPP Addendum	5.2.4.4 Page 41	60 days after approval of Sitewide Work Plan	08/01/97	07/15/97	09/97	
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Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Place EPA/DEQ approved Deed Restrictions or other institutional controls for offsite properties	3.3.3.3 (3) Page 19	Within 1 year of initiation of RD/RA (Entry of CD) – West Perimeter	04/08/98	03/08/98	Completed with BNSF on 11/03/98; supplement for Simpson submitted on 12/30/98	On file
		East Perimeter	04/13/2001	04/01/01	04/10/01	On file
GW Predesign Report for GW with VOC	5.2.4.4 Page 41	90 days after receipt of the second round of GW data	To be determined	01/20/99	01/20/99 (Main Plant area)	10/12/00
Design Report for GW with VOC	5.2.4.4 Page 41	90 days after approval of EPA Predesign Report	To be determined	Dec. 1998 (Farm Ponds)	12/21/98 (Farm Ponds)	10/12/00 (Farm Ponds)
				July 1999 (Extraction)	05/27/99 (Farm Ponds addendum 1) 7/15/99 (Extraction Conceptual Design)	03/02/00 (Extraction)
				June 2000 (Fabrication and East Perimeter)	6/15/00 (Extraction 90-Percent Design)	10/12/00 (Fabrication)
					6/30/00 (Fabrication + East Perimeter Conceptual Design) 01/16/01 (Fabrication Area 70-Percent Design Report)	03/13/01

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Remedial Action Work Plan for GW with VOC	5.2.4.4 Page 41	60 days after Approval of Design Report	To be determined	Dec 1998 (Farm Ponds) July 2000 (Extraction) June 2000 (Fabrication and East Perimeter)	12/21/98 (Farm Ponds) 05/27/99 (Farm Ponds addendum 1) 7/15/99 (Extraction) 6/30/00 (Fabrication + East Perimeter)	10/12/00 (Farm Ponds) 03/02/00 (Extraction) 10/12/00 (Fabrication)
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to construction	South Extraction Fabrication	08/17/00 04/05/01	08/17/2000 04/05/01	NA NA
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary completion of construction	South Extraction Fabrication	10/12/00 04/05/01	10/19/00 (South Extraction) 04/05/01 (Fabrication)	NA
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all construction items	Fabrication	August 2001	08/03/01	NA
Groundwater Extraction System Construction Report	5.2.4.4 Page 41	90 days after Completion of Construction South Extraction Fabrication	 01/16/01 09/30/01	 02/15/01 09/22/01	 03/07/01 11/5/01	 05/30/01 05/23/02

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Three-Year Evaluation Report for GW with VOC	5.2.4.4 Page 41	Three years after completion of system startup	To be determined	May 2003 (Farm Ponds Area),	5/29/03	9/04/03
				August 2003 (Solids Area)	8/25/03	4/05/04
				Sep 2007 (South Extraction with Feed Makeup)	9/17/07	Pending
				July 2005 (Fabrication)	7/8/05	Cooling Tower Treatment – 8/19/05
				July 2006 - Fabrication Addendum	8/07/06	1/25/07
Work Plan for GW Remedy Modification for GW with VOC	5.2.4.4 Page 41	Subject to findings of three-year evaluation report	To be determined	To be determined	To be determined	To be determined
Precertification Inspection	6.2.2.6 Page 55	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6 Page 55	After precertification inspection	To be determined	To be determined	To be determined	To be determined
Groundwater from Feed Makeup Area						
RD Work Plan for GW in FMU incl. SAP Addendum and Treatability Study Plan	5.2.5.6 Page 44	90 days after Approval of Sitewide Work Plan	09/02/97	09/02/97	08/28/97 (Revised and submitted on 07/27/98) Revised and incorporated with Extraction Area RDR/RAWP	03/02/00

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Treatability Study Report for GW in FMU (Predesign)	5.2.5.6 Page 44	365 days after approval of RD Work Plan	09/18/98	11/30/98	11/30/98 Revised and incorporated with Extraction Area RDR/RAWP	03/02/00
Remedial Design Report for GW in FMU	5.2.5.6 Page 44	Revised and incorporated with Extraction Area RDR/RAWP Design Mod. No. 1 Treatability Results Memorandum Design Mod. No. 2	To be determined	07/01/99 01/03/01 04/05/01 09/15/01	7/15/99 01/03/01 04/05/01 09/27/01	03/02/00 01/17/01 04/05/01 (verbal) 09/28/01
Remedial Action Work Plan for GW in FMU	5.2.5.6 Page 44	Schedule is subject to treatability findings Revised and incorporated with Extraction Area RDR/RAWP Remedial Action Startup Addendum for EW-3 Remedial action addendum to be submitted once design modification work is completed	To be determined	07/01/99 (extended to 07/15/99) 09/27/01	07/15/99 09/27/01 04/07/02 Provided in Construction Report	03/02/00 09/28/01
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to construction		08/17/00	08/17/00	01/11/02

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary completion of construction	Feed Makeup	06/13/02	06/13/02	NA
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all construction items	Not required	Not required	NA	NA
Remedial Action Construction Report for GW in FMU	5.2.5.6 Page 44	Schedule is subject to Design Modification No. 1 findings	07/15/02	07/01/02	7/18/02	09/26/02
Three-year Evaluation Report for GW in FMU	5.2.5.6 Page 44	Schedule is subject to implementation of Remedial Action Design	Consolidated with South Extraction Area VOC 3-Yr Review	Sep 2007	9/17/07	Pending
RD/RA Work Plan for Final Remedy	5.2.5.6 Page 44	Three years after completion of Remedial Action Report	To be determined	To be determined	To be determined	To be determined
Precertification Inspection	6.2.2.6 Page 58	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6	After precertification inspection	To be determined	To be determined	To be determined	To be determined
Sitewide Actions						
Notification of Institutional Controls and Deed Restrictions	5.2.6.6 Page 48	90 days after entry of Consent Decree	07/08/97	07/01/97	07/08/97	To be determined

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Environmental Evaluation Protocol	5.2.6.6 Page 48	90 days after approval of Sitewide RD Work Plan	09/02/97	09/02/97	08/28/97 amended 06/25/98 amended 12/15/04 amended 8/12/05	NA
Biennial Report of Environmental Evaluations of Uninvestigated Areas	5.2.6.4 Page 47	September 30th of the second year after EPA approval of protocol				
		Year 1997-1999 Report	09/30/99	09/30/99	09/27/99	03/02/00
		Year 1999-2001 Report	09/30/01	09/30/01	10/08/01	
		Year 2001-2003 Report	09/30/03	09/30/03	11/14/03	
		Year 2003-2005 Report	04/20/2004	04/20/2004	04/20/04	
		Year 2001-2003 Report Modified and Resubmitted per EPA Request	Changed to April 1 for even numbered years			EPA Comments - 07/22/04 Respond to EPA Comments 09/28/04
	Schedule Modified	Year 2003-2005 Report	04/01/06	04/01/06	04/01/06	Verbally approved by EPA on April 13, 2005).
		Addendum to Year 2003-2005 Report	05/11/06	05/11/06	05/11/06	
		Response to EPA comments on Year 2003-2005 Report			10/02/06	EPA Comments - 08/11/2006
		Year 2006-2007 Report	09/01/08	04/01/08	04/01/08	EPA Comments - 12/31/2008
		Year 2008-2009 Report				
		Year 2010-2011 Report				

Table 2-2B – Statement of Work Deliverables Schedule**Wah Chang NPL Program**

Deliverable	SOW Reference	Schedule	Required Submittal Date^a	Target Date	Actual Submittal Date	Date of Agency Approval
Groundwater and Surface Water SAP	5.2.6.6 Page 48	90 days after EPA approval of GW Predesign Report	To be determined	To be determined	To be determined	To be determined

^a Based on entry of Consent Decree.



Approved By: Electronic Approval

Document Number: W08-FC-WW-017

Radium DMR Supplement

Revision History Found In Environmental SharePoint

Revision Date: 09/21/2015

ATI Millersburg Operations
Cell 3 Radium Composite Data

Report Period: 09/07/2016 to 02/15/2017

Date	Sample #	Concentration (pCi/L)
		Ra-226
9/7/2016	EC-101202	0.2 ± 0.1
9/14/2016	EC-101219	0.3± 0.1
9/21/2016	EC-101234	0.2 ± 0.1
10/4/2016	EC-101277	0.3± 0.2
10/12/2016	EC-101299	0.4± 0.1
10/19/2016	EC-101323	0.3± 0.1
10/26/2016	EC-101340	0.5± 0.1
11/2/2016	EC-101360	0.4± 0.1
11/9/2016	EC-101380	0.5± 0.1
11/16/2016	EC-101408	0.4± 0.1
11/23/2016	EC-101445	0.6± 0.1
11/30/2016	EC-101460	0.4± 0.1
12/7/2016	EC-101476	0.4± 0.1
12/14/2016	EC-101495	0.6± 0.1
12/21/2016	EC-101533	0.2 ± 0.1
12/28/2016	EC-101548	1.1 ± 0.2
1/4/2017	EC-101566	1.1 ± 0.1
1/11/2017	EC-101579	0.6 ± 0.1
1/18/2017	EC-101592	1.0 ± 0.1
1/25/2017	EC-101628	0.4 ± 0.1
2/1/2017	EC-101646	1.0 ± 0.1
2/7/2017	EC-101660	0.5 ± 0.1
2/15/2017	EC-101674	0.9 ± 0.1

3/9/2017

Report Date



Albany Operations
530 34th Ave SW
Albany, OR 97322 U.S.A.
Tel: 541-967-9000
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March 10, 2017

Mr. Ravi Sanga
EPA Remedial Project Manager
U.S. EPA Region 10
1200 Sixth Avenue
Suite 900, ECL 111
Seattle, Washington 98101

RE: Wah Chang January through February 2017 Bimonthly Progress Report,
Consent Decree Requirement, Section 10, Paragraph 30

Dear Mr. Sanga:

In accordance with Section 10 of Wah Chang's Consent Decree, enclosed are three (3) copies of the Bimonthly Progress Report for the December 28, 2016, - February 27, 2017, period. A supplemental discharge monitoring report for radium-226 and radium-228 sampling events is also enclosed.

If you have any questions or need additional information, please contact me at (541) 926-4211 x. 6365.

Regards,

Noel Mak
NPL Program Coordinator

Enclosures: 1. Extraction and Fabrication Area Bimonthly Summaries
2. Table 2-1B and Table 2-2B
3. ATI Millersburg Operations Supplemental DMR

Bimonthly Report for the
Wah Chang NPL Program
January and February 2017

1. Progress made during the current period, including actions taken, problem areas encountered, recommendations for solutions and problems which have been resolved:

South Extraction Area. Groundwater extraction and treatment operations were shutdown on April 18, 2011, per prior EPA approval. The South Extraction Area completed a five year rebound monitoring period in 2016.

Feed Makeup Area. Groundwater extraction and treatment operations yielded 8,127 gallons for this period versus 4,752 gallons for the prior period. Extracted groundwater pH values rose this period from 4.99 standard units (SU) on December 28 to 5.01 SU on February 27.

The reduced extraction volume was due to system outages caused by freezing weather.

Fabrication Area. Groundwater extraction and treatment operations yielded 2,234,794 gallons containing 2.5 pounds of CVOCs this period versus 2,108,199 gallons (6.6 pounds of CVOCs) for the prior period and 2,235,881 (4.6 pounds of CVOCs) during January-February 2016.

Extraction well FW-7 was shutdown on July 30, 2009, with EPA approval. The well is being monitored quarterly for rebound in CVOc concentrations.

Farm Ponds Area. No activity.

Solids Area. No activity.

2. Anticipated problems expected to be encountered, recommended solutions and technical and scheduling implications:

None.

3. Problems that have been resolved including any information obtained from previously identified problem areas:

Freeze damage to extraction wells repaired.

4. Deliverables submitted including dates of completion; deliverables anticipated to be submitted during the next bimonthly period; and reasons due dates for any future deliverable may need to be revised:

Consent Decree deliverables (see Table 2-1B) submitted this period included the November-December bimonthly progress report.

Statement of Work (SOW) deliverables (see Table 2-2B). No SOW deliverables were submitted this period.

5. Upcoming events/activities planned, including such activities as field surveys, meetings, etc., and all major tasks to be performed within the next reporting period:

As schedules permit, conference calls between the EPA remedial project manager, DEQ project manager and the Wah Chang NPL coordinator will continue. These calls generally occur every other Wednesday at 1:30 p.m.

6. Key staffing changes including consultant, contractor or subcontractor personnel:

None to report.

Wah Chang - Extraction Area
Groundwater Remediation Monthly Summary
December 28, 2016 - February 27, 2017

Parameter/Area/Well No.	Notes	Prior Period	Jan-17	Feb-17	This Period	Cumulative
Operation Hours						
South Extraction	(1)	0	0	0	0	78,869
Feed Makeup	(2)	1,394	799.1	671.9	1,471	125,805
Extraction Gallons						
South Extraction	Recorded 8/29/2008					
EW-4		0	0	0	0	0
EW-5		0	0	0	0	0
EW-6		0	0	0	0	0
Total		0	0	0	0	16,494,922
Feed Makeup	Recorded 8/29/2008					
EW-1		2,770	3,849	4,278	8,127	417,046
EW-2		1,982	0	0	0	789,491
EW-3		0	0	0	0	302,802
Total		4,752	3,849	4,278	8,127	4,586,629
Influent Concentration						
South Extraction						
Total VOCs (ug/L)	(4)	0.5		Less Than	0.5	
Feed Makeup						
TDS (mg/L)	(4)	1,410			1,410	
Radium 226 (pCi/L)	(4)	3			3	
Radium 228 (pCi/L)	(4)	3.2			3.2	
Fluoride (mg/L)	(4)	2		Less Than	2	
Midpoint Concentration						
South Extraction						
Total VOCs (ug/L)	(3), (4)	<0.50			<0.50	
Mid-Point Train 1	(3), (4)					
Mid-Point Train 2	(3), (4)					
Contaminant Mass Extracted (pounds)						
Total VOCs		0.00	0.00	0.00	0.00	11
TDS		33	45	50	96	203,633
Fluoride		0.1	0.06	0.07	0.1	203

Notes:

1. South Extraction operations initiated on October 18, 2000.
2. Feed Makeup operations initiated on April 10, 2002.
3. New carbon filter installed on 11/05/08.
4. Data shown for prior period is for samples collected in December 2016. This period is for samples collected in December 2016.

Wah Chang - Fabrication Area
Groundwater Remediation Monthly Summary (1)
December 28, 2016 - February 27, 2017

Parameter/Well No.	Notes	Prior Period	Jan-17	Feb-17	This Period	Cumulative
Operation Hours						
(Start Date)						
FW1	6/28/2001	1152	396.6	606.1	1003	121,974
FW2	6/18/2001	1392	799.1	672.2	1471	131,018
FW3	5/15/2001	1393	740.8	669.4	1410	117,824
FW4	4/26/2001	1394	799.2	672.4	1472	128,036
FW5	8/2/2001	1393	799.1	668.5	1468	121,201
FW7	4/16/2001	0	0	0	0	52,692
Total		6724			6823	969,745
Extraction Gallons						
FW1	Recorded 8/29/2008	691,226	229,901	1,705	231,606	45,535,297
FW2	Recorded 8/29/2008	506,512	320,399	268,809	589,208	86,329,320
FW3	Recorded 8/29/2008	267,585	339,428	338,136	677,564	16,499,739
FW4	Recorded 8/29/2008	362,305	188,189	146,402	334,591	29,674,059
FW5	Recorded 8/29/2008	280,571	182,391	219,434	401,825	23,412,241
FW7	Recorded 8/29/2008	0	0	0	0	12,067,269
Total		2,108,199	1,260,308	974,486	2,234,794	213,517,925
Influent Concentration						
FW1	(Total VOCs) ug/L (2)	673			673	
FW2	(Total VOCs) ug/L (2)	25			25	
FW3	(Total VOCs) ug/L (2)	351			351	
FW4	(Total VOCs) ug/L (2)	375			375	
FW5	(Ammonia/Ammonium) mg/L (2)	347			347	
FW7	(Total VOCs) ug/L (2)	0.5		Less than	0.5	
Midpoint Concentration						
FW1-1	(Total VOCs) ug/L (2)	--			--	CT4 on 10/21/05
FW1-2	(Total VOCs) ug/L (2)	--			--	CT4 on 10/21/05
FW2	(Total VOCs) ug/L (2)	--			--	CT6 on 3/17/06
FW3	(Total VOCs) ug/L (2)	--			--	CT6 on 3/17/06
FW4	(Total VOCs) ug/L (2)	--			--	CT2 on 3/17/06
FW5	(Ammonia/Ammonium) (2, 3)	--			--	
FW7	(Total VOCs) ug/L (2)	--			--	CT2 on 3/17/06
Contaminant Mass Extracted (pounds)						
FW1	(Total VOCs)	5.23	1.29	0.01	1.30	637
FW2	(Total VOCs)	0.12	0.07	0.06	0.12	135
FW3	(Total VOCs)	0.00	0.00	0.00	0.00	127
FW4	(Total VOCs)	1.20	0.59	0.46	1.05	118
FW5	(Ammonia/Ammonium)	1875	528	635	1164	221,136
FW7	(Total VOCs)	0.00	0.00	0.00	0.00	3
Total VOCs		6.6	1.9	0.5	2.5	1,021
Total Ammonia/Ammonium		1875	0	0	1164	221,136

Notes:

- Due to poor well yield (< 0.1 gpm) no pump or treatment system equipment installed at FW-6.
- Results shown for prior period are for samples collected in December 2016. This period is for samples collected in December 2016.
- Ammonium concentration = 1.2142 * ammonia concentration.

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Deliverables Within Lodging of the Consent Decree						
Notification of Project Coordinator and Alternate Project Coordinator	XII. 42 Page. 32	Within 20 days of lodging of CD	02/20/97	02/20/97	01/19/97 03/31/98	03/06/97
Notification of Project Coordinator Change					03/10/00 08/04/00 June 2002 11/12/08	None Received 10/12/00 None Received
Deliverables Within Entry of the Consent Decree						
Owner shall record a certified copy of this CD with the Linn County Clerk, Office of Deeds and Records	V. 9.a Page 13	Within 15 days of the entry of the CD	04/22/97	04/22/97	04/22/97	NA
Owner shall record at the Recorder's Office a Notice of Obligation to provide access under Section XI and related covenants if any.	V. 9.b Page 14	Within 15 days of the entry of the CD	04/22/97	04/22/97	04/22/97	NA
Provide Notice to EPA and DEQ in writing the Name, Title and Qualifications of the Supervising Contractor	VI. 10.a. Page 15	Within 20 days after entry of this CD	04/28/97	02/20/97	02/19/97	03/06/97
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP and, if required, a TSWP and HASP	VI. 11. a. Page 16	Within 45 days of Authorization to Proceed (approval of Supervising Contractor by EPA)	05/21/97	04/03/97	04/03/97	06/02/97
Health and Safety Plan for Field Design Activities	VI. 11.a Page 16	Within 45 days of authorization to proceed (approval of Supervising Contractor by EPA)	05/21/97	05/05/97	05/02/97	NA
Establish financial security in the amount of \$2.5 million in one of 5 forms	XII. 43 Page 33	Within 30 days of Entry of CD	05/07/97	05/07/97	05/02/97	NA
Reimburse \$154,000 to EPA Haz. Substance Superfund	XVII. 54 Page 40	Within 30 days of Entry of CD	05/07/97	05/07/97	05/02/97	NA

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
for past Response Costs						
Written Monthly Progress Reports – 1997	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	05/10/97 06/10/97 07/10/97 08/10/97 09/10/97 10/10/97 11/10/97 12/10/97 01/10/98	05/10/97 06/10/97 07/10/97 08/10/97 09/10/97 10/10/97 11/07/97 12/10/97 01/10/98	05/09/97 06/09/97 07/07/97 08/08/97 09/09/97 10/10/97 11/07/97 12/10/97 01/10/98	NA
Written Monthly Progress Reports – 1998	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/98 03/10/98 04/10/98 05/10/98 06/10/98 07/10/98 08/10/98 09/10/98 10/10/98 11/10/98 12/10/98 01/10/99	02/10/98 03/10/98 04/10/98 05/10/98 06/10/98 07/10/98 08/10/98 09/10/98 10/10/98 11/10/98 12/10/98 01/10/99	02/10/98 03/06/98 04/10/98 05/08/98 06/05/98 07/02/98 08/05/98 09/03/98 10/05/98 11/06/98 12/07/98 01/08/99	
Written Monthly Progress Reports – 1999	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/99 03/10/99 04/10/99 05/10/99 06/10/99 07/10/99 08/10/99 09/10/99 10/10/99 11/10/99 12/10/99 01/10/99	02/10/99 03/10/99 04/10/99 05/10/99 06/10/99 07/10/99 08/10/99 09/10/99 10/10/99 11/10/99 12/10/99 01/10/99	02/05/99 03/05/99 04/07/99 05/06/99 06/08/99 07/08/99 08/05/99 09/08/99 10/04/99 11/05/99 12/07/99 01/07/00	
Written Monthly Progress Reports – 2000	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/00 03/10/00 04/10/00 05/10/00 06/10/00 07/10/00 08/10/00 09/10/00 10/10/00 11/10/00 12/10/00 01/10/01	02/10/00 03/10/00 04/10/00 05/10/00 06/02/00 07/05/00 08/07/00 09/07/00 10/05/00 11/07/00 12/07/00 01/08/01	02/03/00 03/09/00 04/07/00 05/08/00 06/02/00 07/05/00 08/07/00 09/07/00 10/06/00 11/07/00 12/07/00 01/08/01	

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Monthly Progress Reports – 2001	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/01	02/08/01	02/08/01	
			03/10/01	03/08/01	03/08/01	
			04/10/01	04/06/01	04/09/01	
			05/10/01	05/08/01	05/09/01	
			06/10/01	06/06/01	06/07/01	
			07/10/01	07/09/01	07/10/01	
			08/10/01	08/09/01	08/10/01	
			09/10/01	09/07/01	09/10/01	
			10/10/01	10/09/01	10/09/01	
			11/10/01	11/07/01	11/08/01	
			12/10/01	12/06/01	12/07/01	
			01/10/02	01/07/02	01/08/02	
Written Monthly Progress Reports – 2002	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/02	02/07/02	02/08/02	
			03/10/02	03/07/02	03/09/02	
			04/10/02	04/08/02	04/09/02	
			05/10/02	05/07/02	05/08/02	
			06/10/02	06/06/02	06/07/02	
			07/10/02	07/01/02	07/03/02	
			08/10/02	08/08/02	08/09/02	
			09/10/02	09/06/02	09/09/02	
			10/10/02	10/04/02	10/04/02	
			11/10/02	11/06/01	11/06/02	
			12/10/02	12/06/02	12/09/02	
			01/10/03	01/07/03	01/08/03	
Written Monthly Progress Reports – 2003	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/03	02/07/03	02/07/03	
			03/10/03	03/07/03	03/07/03	
			04/10/03	04/08/03	04/08/03	
			05/10/03	05/08/03	05/08/03	
			06/10/03	06/09/03	06/09/03	
			07/10/03	07/08/03	07/08/03	
			08/10/03	08/08/03	08/08/03	
			09/10/03	09/09/03	09/09/03	
			10/10/03	10/07/03	10/07/03	
			11/10/03	11/10/03	11/10/03	
			12/10/03	12/09/03	12/09/03	
			01/10/04	01/09/04	01/09/04	
Written Monthly Progress Reports - 2004	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/04	02/06/04	02/09/04	
			03/10/04	03/10/04	03/10/04	
			04/10/04	04/09/04	04/10/04	
			05/10/04	05/10/04	05/10/04	
			06/10/04	06/10/04	06/10/04	
			07/10/04	07/08/04	07/08/04	
			08/10/04	08/09/04	08/10/04	
			09/10/04	09/09/04	09/10/04	
			10/10/04	10/10/04	10/10/04	
			11/10/04	11/10/04	11/10/04	
			12/10/04	12/10/04	12/10/04	
			01/10/05	01/10/05	01/10/05	
Written Bi-Monthly Progress Reports – 2005 (schedule change verbally approved by EPA 2/16/2005)	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2005, and January 2006	03/10/05	03/09/05	03/10/05	NA
			05/10/05	05/10/05	05/10/05	
			07/10/05	07/08/05	07/10/05	
			09/10/05	09/10/05	09/10/05	
			11/10/05	11/10/05	11/10/05	
			01/10/06	01/10/06	01/10/06	

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule

Wah Chang NPL Program

Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Bi-Monthly Progress Reports - 2006	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2006, and January 2007	03/10/06 05/10/06 07/10/06 09/10/06 11/10/06 01/10/07	03/10/06 05/10/06 07/10/06 09/10/06 11/10/06 01/10/07	03/10/06 05/11/06 07/12/06 09/15/06 11/10/06 01/09/07	NA
Written Bi-Monthly Progress Reports - 2007	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2007, and January 2008	03/10/07 05/10/07 07/10/07 09/10/07 11/10/07 01/10/08	03/10/07 05/10/07 07/10/07 09/10/07 11/10/07 01/10/08	03/12/07 05/10/07 07/10/07 09/10/07 11/09/07 01/10/08	NA
Written Bi-Monthly Progress Reports - 2008	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2008, and January 2009	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	NA
Written Bi-Monthly Progress Reports - 2009	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2009, and January 2010	03/10/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	03/10/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	03/09/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	NA
Written Bi-Monthly Progress Reports - 2010	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2010, and January 2011	03/10/10 05/10/10 07/10/10 09/10/10 11/10/10 01/10/11	03/10/10 05/10/10 07/10/10 09/10/10 11/10/10 01/10/11	03/10/10 05/07/10 07/10/10 09/10/10 11/10/10 01/10/11	NA
Written Bi-Monthly Progress Reports - 2011	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2011, and January 2012	03/10/11 05/10/11 07/10/11 09/10/11 11/10/11 01/10/12	03/10/11 05/10/11 07/10/11 09/10/11 11/10/11 01/10/12	03/10/11 05/10/11 07/08/11 09/09/11 11/10/11 01/10/12	NA
Written Bi-Monthly Progress Reports - 2012	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2012, and January 2013	03/10/12 05/10/12 07/10/12 09/10/12 11/10/12 01/10/13	03/10/12 05/10/12 07/10/12 09/12/12 11/10/12 01/10/13	3/10/12 5/10/12 7/09/12 9/09/12 11/09/12 01/09/13	NA
Written Bi-Monthly Progress Reports - 2013	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2013, and January 2014	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	NA

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule

Wah Chang NPL Program

Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Bi-Monthly Progress Reports - 2014	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2014, and January 2015	03/10/14 05/10/14 07/10/14 09/10/14 11/10/14 01/10/15	03/10/14 05/10/14 07/10/14 09/10/14 11/10/14 01/10/15	03/10/14 05/10/14 07/09/14 09/10/14 11/10/14 01/09/15	NA
Written Bi-Monthly Progress Reports - 2015	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2015, and January 2016	03/10/15 05/10/15 07/10/15 09/10/15 11/10/15 01/10/16	03/10/15 05/10/15 07/10/15 09/10/15 11/10/15 01/10/16	03/10/15 05/05/15 07/09/15 09/10/15 11/10/15 01/10/16	NA
Written Bi-Monthly Progress Reports - 2016	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2016, and January 2017	03/10/16 05/10/16 07/11/16 09/10/16 11/10/16 01/10/17	03/10/16 05/10/16 07/11/16 09/10/16 11/10/16 01/10/17	03/03/16 05/06/16 07/11/16 09/08/16 11/09/16 01/10/17	NA
Other CD Requirements						
Reimburse EPA Future Response Costs	XVII. 56 Page 41	Within 30 days of billing	To be determined			NA
EPA Approval of Plans and Submissions	XI. Page 30	As stated	To be determined			Specific to submittal
Section 103 CERCLA Reporting Requirements	X. 31 Page 29.	Within 24 hours of each occurrence	To be determined			Specific to submittal
Copy of CD available to all Contractors and Subcontractors	III. 3 Page 6		As needed		Barker Trucking 07/02/97	NA
Notification of offsite shipment of waste totaling more than 10 CY to an out-of-state facility	VI. 15. 16. Page 22	Prior to shipment of any waste offsite	To be determined and/or as necessary	05/09/97	05/09/97 06/30/98	06/23/97 07/01/98
Use of Coffin Butte Landfill for non-hazardous CERCLA waste disposal				12/20/00	12/20/00	01/17/01
Certificates of Completion of Construction (CCC)	XV. Page 35	90 days after completion of RA Final Construction. See CD and Table 5-4 ^b	South Extraction Feed Makeup Fabrication	01/17/01 07/31/02 11/01/01	03/07/01 07/18/02 11/05/01	05/30/01 09/26/02 05/23/02
Certificates of Completion of Remedial Action (CCRA)	XV. Page 37	After completion of Remedial Action. See CD	Truax Creek South Extraction	10/01/02 TBD	09/30/02	12/11/02

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
			GW Feed Makeup GW Fabrication GW Farm Ponds GW Solids GW	TBD TBD		
Secure and Maintain Comprehensive Liability Insurance and ensure satisfaction of Worker's Compensation Insurance for Contractors	XVIII. 61 Page 44	15 days before commencing any onsite work	To be determined	Acquired in 1996	05/03/97 renewed	NA
WC shall propose to EPA and DEQ its participation in Community Relations Plan to be developed by the EPA	XXXI.108. Page. 67	Not specified	To be determined			Specific to submittal
Notification of Collection of Samples	VIII. 23 Page 26	28 days prior to sample collection unless otherwise agreed to in writing by EPA	To be determined	Provided in bimonthly progress reports	Provided in bimonthly progress reports	Specific to submittal

^a Based on entry of Consent Decree.

^b Submittal date within 30 days of completion of remedial construction was initially shown. Submittal date was revised on 12/06/01 to 90 days based on SOW Table 5-4.

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Overall Site Management Deliverables						
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP, and HASP	Page 32	Within 45 days of EPA authorization to proceed	05/21/97	04/03/97	04/03/97	06/02/97
Surface and Subsurface Soil RD/RA Deliverables						
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP, and HASP	Page 32	Within 45 days of EPA authorization to proceed	05/21/97	04/03/97	04/03/97	06/02/97
RD/RA Work Plan for Surface and Subsurface Soils including a SAP Addendum, and Transport/ Disposal Plan	5.2.2.4 Page 34, 6.2.1.5 Page 53	Within 60 days of Approval of Sitewide Work Plan	8/01/97	08/01/97	08/01/97	08/25/97
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to initiation of construction	To be determined	09/04/97	08/20/97	N/A
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary project completion of construction	To be determined	To be determined; Schmidt Lake area excavation scheduled for 08/98	08/26/98	10/12/2000
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all outstanding construction items	To be determined	09/15/98	07/31/98 (interim report) 10/30/98 (addendum to 07/31/98 interim report and 08/18/98 EPA comments)	10/12/2000

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
RA Construction Report for Surface and Subsurface Soils	5.2.2.4 Page 34	60 days from completion of RA	To be determined	To be determined	8/20/99 (including all addenda)	03/02/00
Precertification Inspection	6.2.2.6 Page 58	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6 Page 58	After precertification inspection	To be determined	To be determined	To be determined	To be determined
Sediments						
RD Work Plan including SAP Addendum for Sediments	5.2.3.5 Page 37	60 days from Approval of Sitewide Work Plan	8/02/97	04/03/97	04/03/97	06/23/97
RD Report for Sediments	5.2.3.5 Page 37	120 days from Approval of RD Work Plan for Sediments	To be determined	05/02/97	05/05/97	06/23/97
RA Work Plan for Sediments	5.2.3.5 Page 37	30 days from Approval of RD Report	To be determined	05/30/97	06/09/97	07/03/97
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to initiation of construction	To be determined	07/14/97	07/08/97	N/A
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary project completion of construction	To be determined	10/01/97	08/20/97	10/12/2000
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all outstanding construction items	To be determined	11/01/97	10/15/97	10/12/2000

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
RA Construction Report for Sediments	5.2.3.5 Page 37	60 days from completion of construction	12/15/97	12/15/97	12/12/97	10/12/2000
Operation and Maintenance Plan for Sediments	5.2.3.5 Page 37	60 days from completion of construction	12/15/97	12/15/97	12/12/97	10/12/2000
Precertification Inspection	6.2.2.6 Page 55	Within 90 days of attaining Performance Standards for RA	To be determined	Waived	NA	NA
Remedial Action Report	6.2.2.6 Page 55	After precertification inspection	To be determined	Waived	NA	NA
Sediment Monitoring Reports	6.2.3.4 Page 37	Following annual monitoring events	To be determined	August 1998 Event	09/03/98	
				August 1999 Event	10/05/99	03/02/2000
				August 2000 Event	10/13/00	
				August 2001 Event	09/28/01	
				August 2002 Event	10/04/02	12/11/2002
Sediment Monitoring Reports – Post RA Completion	Per EPA Request	Per EPA Request	To be determined	October 2007	11/08/07	Not required
Final RD/RA Report for Sediments	5.2.3.5 Page 37	Following 5-year monitoring period	To be determined	Waived	Not required	Not required

Groundwater with VOC RD/RA Deliverables

RD/RA Work Plan for GW with VOC incl. SAP and QAPP Addendum	5.2.4.4 Page 41	60 days after approval of Sitewide Work Plan	08/01/97	07/15/97	09/97	
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Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Place EPA/DEQ approved Deed Restrictions or other institutional controls for offsite properties	3.3.3.3 (3) Page 19	Within 1 year of initiation of RD/RA (Entry of CD) – West Perimeter	04/08/98	03/08/98	Completed with BNSF on 11/03/98; supplement for Simpson submitted on 12/30/98	On file
		East Perimeter	04/13/2001	04/01/01	04/10/01	On file
GW Predesign Report for GW with VOC	5.2.4.4 Page 41	90 days after receipt of the second round of GW data	To be determined	01/20/99	01/20/99 (Main Plant area)	10/12/00
Design Report for GW with VOC	5.2.4.4 Page 41	90 days after approval of EPA Predesign Report	To be determined	Dec. 1998 (Farm Ponds)	12/21/98 (Farm Ponds)	10/12/00 (Farm Ponds)
				July 1999 (Extraction)	05/27/99 (Farm Ponds addendum 1) 7/15/99 (Extraction Conceptual Design)	03/02/00 (Extraction)
				June 2000 (Fabrication and East Perimeter)	6/15/00 (Extraction 90-Percent Design) 6/30/00 (Fabrication + East Perimeter Conceptual Design)	10/12/00 (Fabrication)
					01/16/01 (Fabrication Area 70-Percent Design Report)	03/13/01

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Remedial Action Work Plan for GW with VOC	5.2.4.4 Page 41	60 days after Approval of Design Report	To be determined	Dec 1998 (Farm Ponds) July 2000 (Extraction) June 2000 (Fabrication and East Perimeter)	12/21/98 (Farm Ponds) 05/27/99 (Farm Ponds addendum 1) 7/15/99 (Extraction) 6/30/00 (Fabrication + East Perimeter)	10/12/00 (Farm Ponds) 03/02/00 (Extraction) 10/12/00 (Fabrication)
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to construction	South Extraction Fabrication	08/17/00 04/05/01	08/17/2000 04/05/01	NA NA
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary completion of construction	South Extraction Fabrication	10/12/00 04/05/01	10/19/00 (South Extraction) 04/05/01 (Fabrication)	NA
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all construction items	Fabrication	August 2001	08/03/01	NA
Groundwater Extraction System Construction Report	5.2.4.4 Page 41	90 days after Completion of Construction South Extraction Fabrication	01/16/01 09/30/01	02/15/01 09/22/01	03/07/01 11/5/01	05/30/01 05/23/02

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Three-Year Evaluation Report for GW with VOC	5.2.4.4 Page 41	Three years after completion of system startup	To be determined	May 2003 (Farm Ponds Area),	5/29/03	9/04/03
				August 2003 (Solids Area)	8/25/03	4/05/04
				Sep 2007 (South Extraction with Feed Makeup)	9/17/07	Pending
				July 2005 (Fabrication)	7/8/05	Cooling Tower Treatment – 8/19/05
				July 2006 - Fabrication Addendum	8/07/06	1/25/07
Work Plan for GW Remedy Modification for GW with VOC	5.2.4.4 Page 41	Subject to findings of three-year evaluation report	To be determined	To be determined	To be determined	To be determined
Precertification Inspection	6.2.2.6 Page 55	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6 Page 55	After precertification inspection	To be determined	To be determined	To be determined	To be determined

Groundwater from Feed Makeup Area

RD Work Plan for GW in FMU incl. SAP Addendum and Treatability Study Plan	5.2.5.6 Page 44	90 days after Approval of Site-wide Work Plan	09/02/97	09/02/97	08/28/97 (Revised and submitted on 07/27/98) Revised and incorporated with Extraction Area RDR/RAWP	03/02/00
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Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Treatability Study Report for GW in FMU (Predesign)	5.2.5.6 Page 44	365 days after approval of RD Work Plan	09/18/98	11/30/98	11/30/98 Revised and incorporated with Extraction Area RDR/RAWP	03/02/00
Remedial Design Report for GW in FMU	5.2.5.6 Page 44	Revised and incorporated with Extraction Area RDR/RAWP Design Mod. No. 1 Treatability Results Memorandum Design Mod. No. 2	To be determined	07/01/99 01/03/01 04/05/01 09/15/01	7/15/99 01/03/01 04/05/01 09/27/01	03/02/00 01/17/01 04/05/01 (verbal) 09/28/01
Remedial Action Work Plan for GW in FMU	5.2.5.6 Page 44	Schedule is subject to treatability findings Revised and incorporated with Extraction Area RDR/RAWP Remedial Action Startup Addendum for EW-3 Remedial action addendum to be submitted once design modification work is completed	To be determined	07/01/99 (extended to 07/15/99) 09/27/01	07/15/99 09/27/01 04/07/02 Provided in Construction Report	03/02/00 09/28/01
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to construction		08/17/00	08/17/00	01/11/02

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATED COMPLETED TASKS

03/10/2017

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary completion of construction	Feed Makeup	06/13/02	06/13/02	NA
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all construction items	Not required	Not required	NA	NA
Remedial Action Construction Report for GW in FMU	5.2.5.6 Page 44	Schedule is subject to Design Modification No. 1 findings	07/15/02	07/01/02	7/18/02	09/26/02
Three-year Evaluation Report for GW in FMU	5.2.5.6 Page 44	Schedule is subject to implementation of Remedial Action Design	Consolidated with South Extraction Area VOC 3-Yr Review	Sep 2007	9/17/07	Pending
RD/RA Work Plan for Final Remedy	5.2.5.6 Page 44	Three years after completion of Remedial Action Report	To be determined	To be determined	To be determined	To be determined
Precertification Inspection	6.2.2.6 Page 58	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6	After precertification inspection	To be determined	To be determined	To be determined	To be determined
Sitewide Actions						
Notification of Institutional Controls and Deed Restrictions	5.2.6.6 Page 48	90 days after entry of Consent Decree	07/08/97	07/01/97	07/08/97	To be determined

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Environmental Evaluation Protocol	5.2.6.6 Page 48	90 days after approval of Sitewide RD Work Plan	09/02/97	09/02/97	08/28/97 amended 06/25/98 amended 12/15/04 amended 8/12/05	NA
Biennial Report of Environmental Evaluations of Uninvestigated Areas	5.2.6.4 Page 47	September 30th of the second year after EPA approval of protocol				
		Year 1997-1999 Report	09/30/99	09/30/99	09/27/99	03/02/00
		Year 1999-2001 Report	09/30/01	09/30/01	10/08/01	
		Year 2001-2003 Report	09/30/03	09/30/03	11/14/03	
		Year 2003-2005 Report	04/20/2004	04/20/2004	04/20/04	
		Year 2001-2003 Report Modified and Resubmitted per EPA Request	Changed to April 1 for even numbered years			EPA Comments - 07/22/04 Respond to EPA Comments 09/28/04
	Schedule Modified	Year 2003-2005 Report	04/01/06	04/01/06	04/01/06	Verbally approved by EPA on April 13, 2005).
		Addendum to Year 2003-2005 Report	05/11/06	05/11/06	05/11/06	
		Response to EPA comments on Year 2003-2005 Report			10/02/06	EPA Comments - 08/11/2006
		Year 2006-2007 Report	09/01/08	04/01/08	04/01/08	EPA Comments - 12/31/2008
		Year 2008-2009 Report				
		Year 2010-2011 Report				

Table 2-2B – Statement of Work Deliverables Schedule**Wah Chang NPL Program**

Deliverable	SOW Reference	Schedule	Required Submittal Date^a	Target Date	Actual Submittal Date	Date of Agency Approval
Groundwater and Surface Water SAP	5.2.6.6 Page 48	90 days after EPA approval of GW Predesign Report	To be determined	To be determined	To be determined	To be determined

^a Based on entry of Consent Decree.



Approved By: Electronic Approval

Document Number: W08-FC-WW-017

Radium DMR Supplement

Revision History Found In Environmental SharePoint

Revision Date: 09/21/2015

ATI Millersburg Operations
Cell 3 Radium Composite Data

Report Period: 09/07/2016 to 02/15/2017

Date	Sample #	Concentration (pCi/L)
		Ra-226
9/7/2016	EC-101202	0.2 ± 0.1
9/14/2016	EC-101219	0.3 ± 0.1
9/21/2016	EC-101234	0.2 ± 0.1
10/4/2016	EC-101277	0.3 ± 0.2
10/12/2016	EC-101299	0.4 ± 0.1
10/19/2016	EC-101323	0.3 ± 0.1
10/26/2016	EC-101340	0.5 ± 0.1
11/2/2016	EC-101360	0.4 ± 0.1
11/9/2016	EC-101380	0.5 ± 0.1
11/16/2016	EC-101408	0.4 ± 0.1
11/23/2016	EC-101445	0.6 ± 0.1
11/30/2016	EC-101460	0.4 ± 0.1
12/7/2016	EC-101476	0.4 ± 0.1
12/14/2016	EC-101495	0.6 ± 0.1
12/21/2016	EC-101533	0.2 ± 0.1
12/28/2016	EC-101548	1.1 ± 0.2
1/4/2017	EC-101566	1.1 ± 0.1
1/11/2017	EC-101579	0.6 ± 0.1
1/18/2017	EC-101592	1.0 ± 0.1
1/25/2017	EC-101628	0.4 ± 0.1
2/1/2017	EC-101646	1.0 ± 0.1
2/7/2017	EC-101660	0.5 ± 0.1
2/15/2017	EC-101674	0.9 ± 0.1

3/9/2017

Report Date



Albany Operations
530 34th Ave SW
Albany, OR 97322 U.S.A.
Tel: 541-967-9000
www.ATImetals.com

March 10, 2017

Mr. Ravi Sanga
EPA Remedial Project Manager
U.S. EPA Region 10
1200 Sixth Avenue
Suite 900, ECL 111
Seattle, Washington 98101

RE: Wah Chang January through February 2017 Bimonthly Progress Report,
Consent Decree Requirement, Section 10, Paragraph 30

Dear Mr. Sanga:

In accordance with Section 10 of Wah Chang's Consent Decree, enclosed are three (3) copies of the Bimonthly Progress Report for the December 28, 2016, - February 27, 2017, period. A supplemental discharge monitoring report for radium-226 and radium-228 sampling events is also enclosed.

If you have any questions or need additional information, please contact me at (541) 926-4211 x. 6365.

Regards,

Noel Mak
NPL Program Coordinator

Enclosures: 1. Extraction and Fabrication Area Bimonthly Summaries
2. Table 2-1B and Table 2-2B
3. ATI Millersburg Operations Supplemental DMR

Bimonthly Report for the
Wah Chang NPL Program
January and February 2017

1. Progress made during the current period, including actions taken, problem areas encountered, recommendations for solutions and problems which have been resolved:

South Extraction Area. Groundwater extraction and treatment operations were shutdown on April 18, 2011, per prior EPA approval. The South Extraction Area completed a five year rebound monitoring period in 2016.

Feed Makeup Area. Groundwater extraction and treatment operations yielded 8,127 gallons for this period versus 4,752 gallons for the prior period. Extracted groundwater pH values rose this period from 4.99 standard units (SU) on December 28 to 5.01 SU on February 27.

The reduced extraction volume was due to system outages caused by freezing weather.

Fabrication Area. Groundwater extraction and treatment operations yielded 2,234,794 gallons containing 2.5 pounds of CVOCs this period versus 2,108,199 gallons (6.6 pounds of CVOCs) for the prior period and 2,235,881 (4.6 pounds of CVOCs) during January-February 2016.

Extraction well FW-7 was shutdown on July 30, 2009, with EPA approval. The well is being monitored quarterly for rebound in CVOC concentrations.

Farm Ponds Area. No activity.

Solids Area. No activity.

2. Anticipated problems expected to be encountered, recommended solutions and technical and scheduling implications:

None.

3. Problems that have been resolved including any information obtained from previously identified problem areas:

Freeze damage to extraction wells repaired.

4. Deliverables submitted including dates of completion; deliverables anticipated to be submitted during the next bimonthly period; and reasons due dates for any future deliverable may need to be revised:

Consent Decree deliverables (see Table 2-1B) submitted this period included the November-December bimonthly progress report.

Statement of Work (SOW) deliverables (see Table 2-2B). No SOW deliverables were submitted this period.

5. Upcoming events/activities planned, including such activities as field surveys, meetings, etc., and all major tasks to be performed within the next reporting period:

As schedules permit, conference calls between the EPA remedial project manager, DEQ project manager and the Wah Chang NPL coordinator will continue. These calls generally occur every other Wednesday at 1:30 p.m.

6. Key staffing changes including consultant, contractor or subcontractor personnel:

None to report.

Wah Chang - Extraction Area
Groundwater Remediation Monthly Summary
December 28, 2016 - February 27, 2017

Parameter/Area/Well No.	Notes	Prior Period	Jan-17	Feb-17	This Period	Cumulative
Operation Hours						
South Extraction	(1)	0	0	0	0	78,869
Feed Makeup	(2)	1,394	799.1	671.9	1,471	125,805
Extraction Gallons						
South Extraction	Recorded 8/29/2008					
EW-4		0	0	0	0	0
EW-5		0	0	0	0	0
EW-6		0	0	0	0	0
Total		0	0	0	0	16,494,922
Feed Makeup	Recorded 8/29/2008					
EW-1		2,770	3,849	4,278	8,127	417,046
EW-2		1,982	0	0	0	789,491
EW-3		0	0	0	0	302,802
Total		4,752	3,849	4,278	8,127	4,586,629
Influent Concentration						
South Extraction						
Total VOCs (ug/L)	(4)	0.5		Less Than	0.5	
Feed Makeup						
TDS (mg/L)	(4)	1,410			1,410	
Radium 226 (pCi/L)	(4)	3			3	
Radium 228 (pCi/L)	(4)	3.2			3.2	
Fluoride (mg/L)	(4)	2		Less Than	2	
Midpoint Concentration						
South Extraction						
Total VOCs (ug/L)	(3), (4)	<0.50			<0.50	
Mid-Point Train 1	(3), (4)					
Mid-Point Train 2	(3), (4)					
Contaminant Mass Extracted (pounds)						
Total VOCs		0.00	0.00	0.00	0.00	11
TDS		33	45	50	96	203,633
Fluoride		0.1	0.06	0.07	0.1	203

Notes:

1. South Extraction operations initiated on October 18, 2000.
2. Feed Makeup operations initiated on April 10, 2002.
3. New carbon filter installed on 11/05/08.
4. Data shown for prior period is for samples collected in December 2016. This period is for samples collected in December 2016.

Wah Chang - Fabrication Area
Groundwater Remediation Monthly Summary (1)
December 28, 2016 - February 27, 2017

Parameter/Well No.	Notes	Prior Period	Jan-17	Feb-17	This Period	Cumulative
Operation Hours						
(Start Date)						
FW1	6/28/2001	1152	396.6	606.1	1003	121,974
FW2	6/18/2001	1392	799.1	672.2	1471	131,018
FW3	5/15/2001	1393	740.8	669.4	1410	117,824
FW4	4/26/2001	1394	799.2	672.4	1472	128,036
FW5	8/2/2001	1393	799.1	668.5	1468	121,201
FW7	4/16/2001	0	0	0	0	52,692
Total		6724			6823	969,745
Extraction Gallons						
FW1	Recorded 8/29/2008	691,226	229,901	1,705	231,606	45,535,297
FW2	Recorded 8/29/2008	506,512	320,399	268,809	589,208	86,329,320
FW3	Recorded 8/29/2008	267,585	339,428	338,136	677,564	16,499,739
FW4	Recorded 8/29/2008	362,305	188,189	146,402	334,591	29,674,059
FW5	Recorded 8/29/2008	280,571	182,391	219,434	401,825	23,412,241
FW7	Recorded 8/29/2008	0	0	0	0	12,067,269
Total		2,108,199	1,260,308	974,486	2,234,794	213,517,925
Influent Concentration						
FW1	(Total VOCs) ug/L (2)	673			673	
FW2	(Total VOCs) ug/L (2)	25			25	
FW3	(Total VOCs) ug/L (2)	351			351	
FW4	(Total VOCs) ug/L (2)	375			375	
FW5	(Ammonia/Ammonium) mg/L (2)	347			347	
FW7	(Total VOCs) ug/L (2)	0.5		Less than	0.5	
Midpoint Concentration						
FW1-1	(Total VOCs) ug/L (2)	--			--	CT4 on 10/21/05
FW1-2	(Total VOCs) ug/L (2)	--			--	CT4 on 10/21/05
FW2	(Total VOCs) ug/L (2)	--			--	CT6 on 3/17/06
FW3	(Total VOCs) ug/L (2)	--			--	CT6 on 3/17/06
FW4	(Total VOCs) ug/L (2)	--			--	CT2 on 3/17/06
FW5	(Ammonia/Ammonium) (2, 3)	--			--	
FW7	(Total VOCs) ug/L (2)	--			--	CT2 on 3/17/06
Contaminant Mass Extracted (pounds)						
FW1	(Total VOCs)	5.23	1.29	0.01	1.30	637
FW2	(Total VOCs)	0.12	0.07	0.06	0.12	135
FW3	(Total VOCs)	0.00	0.00	0.00	0.00	127
FW4	(Total VOCs)	1.20	0.59	0.46	1.05	118
FW5	(Ammonia/Ammonium)	1875	528	635	1164	221,136
FW7	(Total VOCs)	0.00	0.00	0.00	0.00	3
Total VOCs		6.6	1.9	0.5	2.5	1,021
Total Ammonia/Ammonium		1875	0	0	1164	221,136

Notes:

1. Due to poor well yield (< 0.1 gpm) no pump or treatment system equipment installed at FW-6.
2. Results shown for prior period are for samples collected in December 2016. This period is for samples collected in December 2016.
3. Ammonium concentration = 1.2142 * ammonia concentration.

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Deliverables Within Lodging of the Consent Decree						
Notification of Project Coordinator and Alternate Project Coordinator	XII. 42 Page. 32	Within 20 days of lodging of CD	02/20/97	02/20/97	01/19/97 03/31/98	03/06/97
Notification of Project Coordinator Change					03/10/00 08/04/00 June 2002 11/12/08	None Received 10/12/00 None Received
Deliverables Within Entry of the Consent Decree						
Owner shall record a certified copy of this CD with the Linn County Clerk, Office of Deeds and Records	V. 9.a Page 13	Within 15 days of the entry of the CD	04/22/97	04/22/97	04/22/97	NA
Owner shall record at the Recorder's Office a Notice of Obligation to provide access under Section XI and related covenants if any.	V. 9.b Page 14	Within 15 days of the entry of the CD	04/22/97	04/22/97	04/22/97	NA
Provide Notice to EPA and DEQ in writing the Name, Title and Qualifications of the Supervising Contractor	VI. 10.a. Page 15	Within 20 days after entry of this CD	04/28/97	02/20/97	02/19/97	03/06/97
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP and, if required, a TSWP and HASP	VI. 11. a. Page 16	Within 45 days of Authorization to Proceed (approval of Supervising Contractor by EPA)	05/21/97	04/03/97	04/03/97	06/02/97
Health and Safety Plan for Field Design Activities	VI. 11.a Page 16	Within 45 days of authorization to proceed (approval of Supervising Contractor by EPA)	05/21/97	05/05/97	05/02/97	NA
Establish financial security in the amount of \$2.5 million in one of 5 forms	XII. 43 Page 33	Within 30 days of Entry of CD	05/07/97	05/07/97	05/02/97	NA
Reimburse \$154,000 to EPA Haz. Substance Superfund	XVII. 54 Page 40	Within 30 days of Entry of CD	05/07/97	05/07/97	05/02/97	NA

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
for past Response Costs						
Written Monthly Progress Reports – 1997	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	05/10/97 06/10/97 07/10/97 08/10/97 09/10/97 10/10/97 11/10/97 12/10/97 01/10/98	05/10/97 06/10/97 07/10/97 08/10/97 09/10/97 10/10/97 11/07/97 12/10/97 01/10/98	05/09/97 06/09/97 07/07/97 08/08/97 09/09/97 10/10/97 11/07/97 12/10/97 01/10/98	NA
Written Monthly Progress Reports – 1998	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/98 03/10/98 04/10/98 05/10/98 06/10/98 07/10/98 08/10/98 09/10/98 10/10/98 11/10/98 12/10/98 01/10/99	02/10/98 03/10/98 04/10/98 05/10/98 06/10/98 07/10/98 08/10/98 09/10/98 10/10/98 11/10/98 12/10/98 01/10/99	02/10/98 03/06/98 04/10/98 05/08/98 06/05/98 07/02/98 08/05/98 09/03/98 10/05/98 11/06/98 12/07/98 01/08/99	
Written Monthly Progress Reports – 1999	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/99 03/10/99 04/10/99 05/10/99 06/10/99 07/10/99 08/10/99 09/10/99 10/10/99 11/10/99 12/10/99 01/10/99	02/10/99 03/10/99 04/10/99 05/10/99 06/10/99 07/10/99 08/10/99 09/10/99 10/10/99 11/10/99 12/10/99 01/10/99	02/05/99 03/05/99 04/07/99 05/06/99 06/08/99 07/08/99 08/05/99 09/08/99 10/04/99 11/05/99 12/07/99 01/07/00	
Written Monthly Progress Reports – 2000	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/00 03/10/00 04/10/00 05/10/00 06/10/00 07/10/00 08/10/00 09/10/00 10/10/00 11/10/00 12/10/00 01/10/01	02/10/00 03/10/00 04/10/00 05/10/00 06/02/00 07/05/00 08/07/00 09/07/00 10/05/00 11/07/00 12/07/00 01/08/01	02/03/00 03/09/00 04/07/00 05/08/00 06/02/00 07/05/00 08/07/00 09/07/00 10/06/00 11/07/00 12/07/00 01/08/01	

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Monthly Progress Reports – 2001	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/01 03/10/01 04/10/01 05/10/01 06/10/01 07/10/01 08/10/01 09/10/01 10/10/01 11/10/01 12/10/01 01/10/02	02/08/01 03/08/01 04/06/01 05/08/01 06/06/01 07/09/01 08/09/01 09/07/01 10/09/01 11/07/01 12/06/01 01/07/02	02/08/01 03/08/01 04/09/01 05/09/01 06/07/01 07/10/01 08/10/01 09/10/01 10/09/01 11/08/01 12/07/01 01/08/02	
Written Monthly Progress Reports – 2002	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/02 03/10/02 04/10/02 05/10/02 06/10/02 07/10/02 08/10/02 09/10/02 10/10/02 11/10/02 12/10/02 01/10/03	02/07/02 03/07/02 04/08/02 05/07/02 06/06/02 07/01/02 08/08/02 09/06/02 10/04/02 11/06/01 12/06/02 01/07/03	02/08/02 03/09/02 04/09/02 05/08/02 06/07/02 07/03/02 08/09/02 09/09/02 10/04/02 11/06/02 12/09/02 01/08/03	
Written Monthly Progress Reports – 2003	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/03 03/10/03 04/10/03 05/10/03 06/10/03 07/10/03 08/10/03 09/10/03 10/10/03 11/10/03 12/10/03 01/10/04	02/07/03 03/07/03 04/08/03 05/08/03 06/09/03 07/08/03 08/08/03 09/09/03 10/07/03 11/10/03 12/09/03 01/09/04	02/07/03 03/07/03 04/08/03 05/08/03 06/09/03 07/08/03 08/08/03 09/09/03 10/07/03 11/10/03 12/09/03 01/09/04	
Written Monthly Progress Reports - 2004	X. Pages 28 & 29	Monthly by the 10th day of each month following entry of the CD	02/10/04 03/10/04 04/10/04 05/10/04 06/10/04 07/10/04 08/10/04 09/10/04 10/10/04 11/10/04 12/10/04 01/10/05	02/06/04 03/10/04 04/09/04 05/10/04 06/10/04 07/08/04 08/09/04 09/09/04 10/10/04 11/10/04 12/10/04 01/10/05	02/09/04 03/10/04 04/10/04 05/10/04 06/10/04 07/08/04 08/10/04 09/10/04 10/10/04 11/10/04 12/10/04 01/10/05	
Written Bi-Monthly Progress Reports – 2005 (schedule change verbally approved by EPA 2/16/2005)	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2005, and January 2006	03/10/05 05/10/05 07/10/05 09/10/05 11/10/05 01/10/06	03/09/05 05/10/05 07/08/05 09/10/05 11/10/05 01/10/06	03/10/05 05/10/05 07/10/05 09/10/05 11/10/05 01/10/06	NA

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Bi-Monthly Progress Reports - 2006	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2006, and January 2007	03/10/06 05/10/06 07/10/06 09/10/06 11/10/06 01/10/07	03/10/06 05/10/06 07/10/06 09/10/06 11/10/06 01/10/07	03/10/06 05/11/06 07/12/06 09/15/06 11/10/06 01/09/07	NA
Written Bi-Monthly Progress Reports - 2007	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2007, and January 2008	03/10/07 05/10/07 07/10/07 09/10/07 11/10/07 01/10/08	03/10/07 05/10/07 07/10/07 09/10/07 11/10/07 01/10/08	03/12/07 05/10/07 07/10/07 09/10/07 11/09/07 01/10/08	NA
Written Bi-Monthly Progress Reports - 2008	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2008, and January 2009	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	03/10/08 05/10/08 07/10/08 09/10/08 11/10/08 01/10/08	NA
Written Bi-Monthly Progress Reports - 2009	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2009, and January 2010	03/10/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	03/10/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	03/09/09 05/10/09 07/10/09 09/10/09 11/10/09 01/10/10	NA
Written Bi-Monthly Progress Reports - 2010	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2010, and January 2011	03/10/10 05/10/10 07/10/10 09/10/10 11/10/10 01/10/11	03/10/10 05/10/10 07/10/10 09/10/10 11/10/10 01/10/11	03/10/10 05/07/10 07/10/10 09/10/10 11/10/10 01/10/11	NA
Written Bi-Monthly Progress Reports - 2011	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2011, and January 2012	03/10/11 05/10/11 07/10/11 09/10/11 11/10/11 01/10/12	03/10/11 05/10/11 07/10/11 09/10/11 11/10/11 01/10/12	03/10/11 05/10/11 07/08/11 09/09/11 11/10/11 01/10/12	NA
Written Bi-Monthly Progress Reports - 2012	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2012, and January 2013	03/10/12 05/10/12 07/10/12 09/10/12 11/10/12 01/10/13	03/10/12 05/10/12 07/10/12 09/12/12 11/10/12 01/10/13	3/10/12 5/10/12 7/09/12 9/09/12 11/09/12 01/09/13	NA
Written Bi-Monthly Progress Reports - 2013	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2013, and January 2014	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	03/10/13 05/10/13 07/10/13 09/10/13 11/10/13 01/10/14	NA

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Written Bi-Monthly Progress Reports - 2014	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2014, and January 2015	03/10/14 05/10/14 07/10/14 09/10/14 11/10/14 01/10/15	03/10/14 05/10/14 07/10/14 09/10/14 11/10/14 01/10/15	03/10/14 05/10/14 07/09/14 09/10/14 11/10/14 01/09/15	NA
Written Bi-Monthly Progress Reports - 2015	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2015, and January 2016	03/10/15 05/10/15 07/10/15 09/10/15 11/10/15 01/10/16	03/10/15 05/10/15 07/10/15 09/10/15 11/10/15 01/10/16	03/10/15 05/05/15 07/09/15 09/10/15 11/10/15 01/10/16	NA
Written Bi-Monthly Progress Reports - 2016	X. Pages 28 & 29	By the 10th day of March, May, July, September and November 2016, and January 2017	03/10/16 05/10/16 07/11/16 09/10/16 11/10/16 01/10/17	03/10/16 05/10/16 07/11/16 09/10/16 11/10/16 01/10/17	03/03/16 05/06/16 07/11/16 09/08/16 11/09/16 01/10/17	NA
Other CD Requirements						
Reimburse EPA Future Response Costs	XVII. 56 Page 41	Within 30 days of billing	To be determined			NA
EPA Approval of Plans and Submissions	XI. Page 30	As stated	To be determined			Specific to submittal
Section 103 CERCLA Reporting Requirements	X. 31 Page 29.	Within 24 hours of each occurrence	To be determined			Specific to submittal
Copy of CD available to all Contractors and Subcontractors	III. 3 Page 6		As needed		Barker Trucking 07/02/97	NA
Notification of offsite shipment of waste totaling more than 10 CY to an out-of-state facility	VI. 15. 16. Page 22	Prior to shipment of any waste offsite	To be determined and/or as necessary	05/09/97	05/09/97 06/30/98	06/23/97 07/01/98
Use of Coffin Butte Landfill for non-hazardous CERCLA waste disposal				12/20/00	12/20/00	01/17/01
Certificates of Completion of Construction (CCC)	XV. Page 35	90 days after completion of RA Final Construction. See CD and Table 5-4 ^b	South Extraction Feed Makeup Fabrication	01/17/01 07/31/02 11/01/01	03/07/01 07/18/02 11/05/01	05/30/01 09/26/02 05/23/02
Certificates of Completion of Remedial Action (CCRA)	XV. Page 37	After completion of Remedial Action. See CD	Truax Creek South Extraction	10/01/02 TBD	09/30/02	12/11/02

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

03/10/2017

Table 2-1B – Consent Decree Deliverables Schedule						
Wah Chang NPL Program						
Deliverable	Consent Decree (CD) Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
			GW Feed Makeup GW Fabrication GW Farm Ponds GW Solids GW	TBD TBD		
Secure and Maintain Comprehensive Liability Insurance and ensure satisfaction of Worker's Compensation Insurance for Contractors	XVIII. 61 Page 44	15 days before commencing any onsite work	To be determined	Acquired in 1996	05/03/97 renewed	NA
WC shall propose to EPA and DEQ its participation in Community Relations Plan to be developed by the EPA	XXXI. 108. Page. 67	Not specified	To be determined			Specific to submittal
Notification of Collection of Samples	VIII. 23 Page 26	28 days prior to sample collection unless otherwise agreed to in writing by EPA	To be determined	Provided in bimonthly progress reports	Provided in bimonthly progress reports	Specific to submittal

^a Based on entry of Consent Decree.

^b Submittal date within 30 days of completion of remedial construction was initially shown. Submittal date was revised on 12/06/01 to 90 days based on SOW Table 5-4.

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Overall Site Management Deliverables						
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP, and HASP	Page 32	Within 45 days of EPA authorization to proceed	05/21/97	04/03/97	04/03/97	06/02/97
Surface and Subsurface Soil RD/RA Deliverables						
Sitewide RD/RA Work Plan including a SAP, FSP, QAPP, and HASP	Page 32	Within 45 days of EPA authorization to proceed	05/21/97	04/03/97	04/03/97	06/02/97
RD/RA Work Plan for Surface and Subsurface Soils including a SAP Addendum, and Transport/ Disposal Plan	5.2.2.4 Page 34, 6.2.1.5 Page 53	Within 60 days of Approval of Sitewide Work Plan	8/01/97	08/01/97	08/01/97	08/25/97
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to initiation of construction	To be determined	09/04/97	08/20/97	N/A
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary project completion of construction	To be determined	To be determined; Schmidt Lake area excavation scheduled for 08/98	08/26/98	10/12/2000
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all outstanding construction items	To be determined	09/15/98	07/31/98 (interim report) 10/30/98 (addendum to 07/31/98 interim report and 08/18/98 EPA comments)	10/12/2000

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
RA Construction Report for Surface and Subsurface Soils	5.2.2.4 Page 34	60 days from completion of RA	To be determined	To be determined	8/20/99 (including all addenda)	03/02/00
Precertification Inspection	6.2.2.6 Page 58	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6 Page 58	After precertification inspection	To be determined	To be determined	To be determined	To be determined
Sediments						
RD Work Plan including SAP Addendum for Sediments	5.2.3.5 Page 37	60 days from Approval of Sitewide Work Plan	8/02/97	04/03/97	04/03/97	06/23/97
RD Report for Sediments	5.2.3.5 Page 37	120 days from Approval of RD Work Plan for Sediments	To be determined	05/02/97	05/05/97	06/23/97
RA Work Plan for Sediments	5.2.3.5 Page 37	30 days from Approval of RD Report	To be determined	05/30/97	06/09/97	07/03/97
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to initiation of construction	To be determined	07/14/97	07/08/97	N/A
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary project completion of construction	To be determined	10/01/97	08/20/97	10/12/2000
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all outstanding construction items	To be determined	11/01/97	10/15/97	10/12/2000

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATE COMPLETED TASKS.

3/10/2017

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
RA Construction Report for Sediments	5.2.3.5 Page 37	60 days from completion of construction	12/15/97	12/15/97	12/12/97	10/12/2000
Operation and Maintenance Plan for Sediments	5.2.3.5 Page 37	60 days from completion of construction	12/15/97	12/15/97	12/12/97	10/12/2000
Precertification Inspection	6.2.2.6 Page 55	Within 90 days of attaining Performance Standards for RA	To be determined	Waived	NA	NA
Remedial Action Report	6.2.2.6 Page 55	After precertification inspection	To be determined	Waived	NA	NA
Sediment Monitoring Reports	6.2.3.4 Page 37	Following annual monitoring events	To be determined	August 1998 Event	09/03/98	
				August 1999 Event	10/05/99	03/02/2000
				August 2000 Event	10/13/00	
				August 2001 Event	09/28/01	
				August 2002 Event	10/04/02	12/11/2002
Sediment Monitoring Reports – Post RA Completion	Per EPA Request	Per EPA Request	To be determined	October 2007	11/08/07	Not required
Final RD/RA Report for Sediments	5.2.3.5 Page 37	Following 5-year monitoring period	To be determined	Waived	Not required	Not required
Groundwater with VOC RD/RA Deliverables						
RD/RA Work Plan for GW with VOC incl. SAP and QAPP Addendum	5.2.4.4 Page 41	60 days after approval of Sitewide Work Plan	08/01/97	07/15/97	09/97	

NOTE: SHADED CELLS INDICATE ACTIVE TASKS. UNSHADED CELLS INDICATED COMPLETED TASKS

03/10/2017

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Place EPA/DEQ approved Deed Restrictions or other institutional controls for offsite properties	3.3.3.3 (3) Page 19	Within 1 year of initiation of RD/RA (Entry of CD) – West Perimeter	04/08/98	03/08/98	Completed with BNSF on 11/03/98; supplement for Simpson submitted on 12/30/98	On file
		East Perimeter	04/13/2001	04/01/01	04/10/01	On file
GW Predesign Report for GW with VOC	5.2.4.4 Page 41	90 days after receipt of the second round of GW data	To be determined	01/20/99	01/20/99 (Main Plant area)	10/12/00
Design Report for GW with VOC	5.2.4.4 Page 41	90 days after approval of EPA Predesign Report	To be determined	Dec. 1998 (Farm Ponds)	12/21/98 (Farm Ponds)	10/12/00 (Farm Ponds)
				July 1999 (Extraction)	05/27/99 (Farm Ponds addendum 1) 7/15/99 (Extraction Conceptual Design)	03/02/00 (Extraction)
				June 2000 (Fabrication and East Perimeter)	6/15/00 (Extraction 90-Percent Design) 6/30/00 (Fabrication + East Perimeter Conceptual Design)	10/12/00 (Fabrication)
					01/16/01 (Fabrication Area 70-Percent Design Report)	03/13/01

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Remedial Action Work Plan for GW with VOC	5.2.4.4 Page 41	60 days after Approval of Design Report	To be determined	Dec 1998 (Farm Ponds) July 2000 (Extraction) June 2000 (Fabrication and East Perimeter)	12/21/98 (Farm Ponds) 05/27/99 (Farm Ponds addendum 1) 7/15/99 (Extraction) 6/30/00 (Fabrication + East Perimeter)	10/12/00 (Farm Ponds) 03/02/00 (Extraction) 10/12/00 (Fabrication)
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to construction	South Extraction Fabrication	08/17/00 04/05/01	08/17/2000 04/05/01	NA NA
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary completion of construction	South Extraction Fabrication	10/12/00 04/05/01	10/19/00 (South Extraction) 04/05/01 (Fabrication)	NA
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all construction items	Fabrication	August 2001	08/03/01	NA
Groundwater Extraction System Construction Report	5.2.4.4 Page 41	90 days after Completion of Construction South Extraction Fabrication	 01/16/01 09/30/01	 02/15/01 09/22/01	 03/07/01 11/5/01	 05/30/01 05/23/02

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Three-Year Evaluation Report for GW with VOC	5.2.4.4 Page 41	Three years after completion of system startup	To be determined	May 2003 (Farm Ponds Area),	5/29/03	9/04/03
				August 2003 (Solids Area)	8/25/03	4/05/04
				Sep 2007 (South Extraction with Feed Makeup)	9/17/07	Pending
				July 2005 (Fabrication)	7/8/05	Cooling Tower Treatment – 8/19/05
				July 2006 - Fabrication Addendum	8/07/06	1/25/07
Work Plan for GW Remedy Modification for GW with VOC	5.2.4.4 Page 41	Subject to findings of three-year evaluation report	To be determined	To be determined	To be determined	To be determined
Precertification Inspection	6.2.2.6 Page 55	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6 Page 55	After precertification inspection	To be determined	To be determined	To be determined	To be determined
Groundwater from Feed Makeup Area						
RD Work Plan for GW in FMU incl. SAP Addendum and Treatability Study Plan	5.2.5.6 Page 44	90 days after Approval of Sitewide Work Plan	09/02/97	09/02/97	08/28/97 (Revised and submitted on 07/27/98) Revised and incorporated with Extraction Area RDR/RAWP	03/02/00

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Treatability Study Report for GW in FMU (Predesign)	5.2.5.6 Page 44	365 days after approval of RD Work Plan	09/18/98	11/30/98	11/30/98 Revised and incorporated with Extraction Area RDR/RAWP	03/02/00
Remedial Design Report for GW in FMU	5.2.5.6 Page 44	Revised and incorporated with Extraction Area RDR/RAWP Design Mod. No. 1 Treatability Results Memorandum Design Mod. No. 2	To be determined	07/01/99 01/03/01 04/05/01 09/15/01	7/15/99 01/03/01 04/05/01 09/27/01	03/02/00 01/17/01 04/05/01 (verbal) 09/28/01
Remedial Action Work Plan for GW in FMU	5.2.5.6 Page 44	Schedule is subject to treatability findings Revised and incorporated with Extraction Area RDR/RAWP Remedial Action Startup Addendum for EW-3 Remedial action addendum to be submitted once design modification work is completed	To be determined	07/01/99 (extended to 07/15/99) 09/27/01	07/15/99 09/27/01 04/07/02 Provided in Construction Report	03/02/00 09/28/01
Preconstruction Conference	6.2.2.1 Page 56	To be held prior to construction		08/17/00	08/17/00	01/11/02

Table 2-2B – Statement of Work Deliverables Schedule**Wah Chang NPL Program**

Deliverable	SOW Reference	Schedule	Required Submittal Date^a	Target Date	Actual Submittal Date	Date of Agency Approval
Prefinal Construction Inspection	6.2.2.2 Page 57	Notify EPA upon preliminary completion of construction	Feed Makeup	06/13/02	06/13/02	NA
Final Construction Inspection	6.2.2.3 Page 57	Notify EPA upon completion of all construction items	Not required	Not required	NA	NA
Remedial Action Construction Report for GW in FMU	5.2.5.6 Page 44	Schedule is subject to Design Modification No. 1 findings	07/15/02	07/01/02	7/18/02	09/26/02
Three-year Evaluation Report for GW in FMU	5.2.5.6 Page 44	Schedule is subject to implementation of Remedial Action Design	Consolidated with South Extraction Area VOC 3-Yr Review	Sep 2007	9/17/07	Pending
RD/RA Work Plan for Final Remedy	5.2.5.6 Page 44	Three years after completion of Remedial Action Report	To be determined	To be determined	To be determined	To be determined
Precertification Inspection	6.2.2.6 Page 58	Within 90 days of attaining Performance Standards for RA	To be determined	To be determined	To be determined	To be determined
Remedial Action Report	6.2.2.6	After precertification inspection	To be determined	To be determined	To be determined	To be determined
Sitewide Actions						
Notification of Institutional Controls and Deed Restrictions	5.2.6.6 Page 48	90 days after entry of Consent Decree	07/08/97	07/01/97	07/08/97	To be determined

Table 2-2B – Statement of Work Deliverables Schedule

Wah Chang NPL Program

Deliverable	SOW Reference	Schedule	Required Submittal Date ^a	Target Date	Actual Submittal Date	Date of Agency Approval
Environmental Evaluation Protocol	5.2.6.6 Page 48	90 days after approval of Sitewide RD Work Plan	09/02/97	09/02/97	08/28/97 amended 06/25/98 amended 12/15/04 amended 8/12/05	NA
Biennial Report of Environmental Evaluations of Uninvestigated Areas	5.2.6.4 Page 47	September 30th of the second year after EPA approval of protocol				
		Year 1997-1999 Report	09/30/99	09/30/99	09/27/99	03/02/00
		Year 1999-2001 Report	09/30/01	09/30/01	10/08/01	
		Year 2001-2003 Report	09/30/03	09/30/03	11/14/03	
		Year 2003-2005 Report	04/20/2004	04/20/2004	04/20/04	
		Year 2001-2003 Report Modified and Resubmitted per EPA Request	Changed to April 1 for even numbered years			EPA Comments - 07/22/04
	Schedule Modified	Year 2003-2005 Report	04/01/06	04/01/06	04/01/06	Respond to EPA Comments 09/28/04
		Addendum to Year 2003-2005 Report	05/11/06	05/11/06	05/11/06	
		Response to EPA comments on Year 2003-2005 Report			10/02/06	EPA Comments - 08/11/2006
		Year 2006-2007 Report	09/01/08	04/01/08	04/01/08	EPA Comments - 12/31/2008
		Year 2008-2009 Report				
		Year 2010-2011 Report				

Table 2-2B – Statement of Work Deliverables Schedule**Wah Chang NPL Program**

Deliverable	SOW Reference	Schedule	Required Submittal Date^a	Target Date	Actual Submittal Date	Date of Agency Approval
Groundwater and Surface Water SAP	5.2.6.6 Page 48	90 days after EPA approval of GW Predesign Report	To be determined	To be determined	To be determined	To be determined

^a Based on entry of Consent Decree.



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Radium DMR Supplement

Revision History Found In Environmental SharePoint

Approved By: Electronic Approval

Revision Date: 09/21/2015

ATI Millersburg Operations

Cell 3 Radium Composite Data

Report Period: 09/07/2016 to 02/15/2017

Date	Sample #	Concentration (pCi/L)
		Ra-226
9/7/2016	EC-101202	0.2 ± 0.1
9/14/2016	EC-101219	0.3 ± 0.1
9/21/2016	EC-101234	0.2 ± 0.1
10/4/2016	EC-101277	0.3 ± 0.2
10/12/2016	EC-101299	0.4 ± 0.1
10/19/2016	EC-101323	0.3 ± 0.1
10/26/2016	EC-101340	0.5 ± 0.1
11/2/2016	EC-101360	0.4 ± 0.1
11/9/2016	EC-101380	0.5 ± 0.1
11/16/2016	EC-101408	0.4 ± 0.1
11/23/2016	EC-101445	0.6 ± 0.1
11/30/2016	EC-101460	0.4 ± 0.1
12/7/2016	EC-101476	0.4 ± 0.1
12/14/2016	EC-101495	0.6 ± 0.1
12/21/2016	EC-101533	0.2 ± 0.1
12/28/2016	EC-101548	1.1 ± 0.2
1/4/2017	EC-101566	1.1 ± 0.1
1/11/2017	EC-101579	0.6 ± 0.1
1/18/2017	EC-101592	1.0 ± 0.1
1/25/2017	EC-101628	0.4 ± 0.1
2/1/2017	EC-101646	1.0 ± 0.1
2/7/2017	EC-101660	0.5 ± 0.1
2/15/2017	EC-101674	0.9 ± 0.1

3/9/2017

Report Date